

meals/day, therefore on an average a daily dose of  $10^8$  to  $10^{10}$  viable cells would be sufficient to prevent the dietary absorption of oxalate.

5 It should be understood that the examples and embodiments described herein are for illustrative purposes only and that various modifications or changes in light thereof will be suggested to persons skilled in the art and are to be included within the spirit and purview of this application and the scope of the appended claims.

In the Claims

1 1. A method for reducing oxalate concentrations in an animal wherein said method  
2 comprises administering a composition comprising a material selected from the group  
3 consisting of oxalate-degrading microbes and oxalate-degrading enzymes.

1 2. The method, according to claim 1, wherein said method comprises administration  
2 of oxalate-degrading enzymes.

1 3. The method, according to claim 2, wherein said oxalate-degrading enzymes are  
2 derived from bacteria.

1 4. The method, according to claim 3; wherein said oxalate-degrading enzymes are  
2 derived from bacteria of the group consisting of *Clostridium*, *Pseudomonas*, and oxalobacter.

1 5. The method, according to claim 2, wherein said enzymes are produced  
2 recombinantly.

1 6. The method, according to claim 5, wherein said enzymes are produced  
2 recombinantly in *Escherichia coli*.

1 7. The method, according to claim 2, which comprises administering formyl-CoA  
2 transferase and oxalyl-CoA decarboxylase.

1           8. The method, according to claim 7, wherein said enzymes are produced  
2 recombinantly.

1           9. The method, according to claim 2, wherein said oxalate-degrading enzymes are  
2 expressed in plants which have been transformed with polynucleotides encoding said  
3 oxalate-degrading enzymes.

1           10. The method, according to claim 1, wherein said method comprises administration  
2 of oxalate-degrading microbes.

1           11. The method, according to claim 10, wherein said oxalate-degrading microbes  
2 have been transformed with polynucleotides which encode said oxalate-degrading enzymes.

1           12. The method, according to claim 2, which further comprises administering an  
2 additional factor selected from the group consisting of oxalyl CoA, MgCl<sub>2</sub> and TPP.

1           13. The method, according to claim 10, which comprises administering whole viable  
2 oxalate-degrading microbes.

1           14. The method, according to claim 13, wherein said microbes are *Oxalobacter*  
2 *formigenes*.

1           15. The method, according to claim 13, wherein said microbes are selected from the  
2 group consisting of *Clostridium* and *Pseudomonas*.

1           16. The method, according to claim 13, wherein said microbes colonize the  
2 intestines.

1           17. The method, according to claim 1, which is used to treat a patient whose  
2           intestines have insufficient numbers of oxalate-degrading bacteria.

1           18. The method, according to claim 17, which is used to treat a patient whose natural  
2           intestinal bacteria have been depleted due to treatment with antibiotics.

1           19. The method, according to claim 1, which is used to treat a domesticated animal,  
2           said animal having deficient numbers of oxalate-degrading bacteria.

1           20. The method, according to claim 19, wherein said domesticated animal is selected  
2           from the group consisting of dogs, cats, rabbits, ferrets, guinea pigs, hamsters and gerbils.

1           21. The method, according to claim 19, wherein said domesticated animal is an  
2           agricultural animal.

1           22. The method, according to claim 21, wherein said agricultural animal is selected  
2           from the group consisting of horses, cows and pigs.

1           23. The method, according to claim 19, which is used treat a domesticated animal,  
2           said animal's natural intestinal bacteria having been depleted due to treatment with  
3           antibiotics.

1           24. The method, according to claim 1, wherein said microbe or said enzyme is  
2           formulated to reduce inactivation in the stomach.

1           25. The method, according to claim 24, wherein said formulation comprises a  
2           coating which dissolves preferentially in the small intestine compared to the stomach.

1           26. A composition for reducing oxalate levels in an animal wherein said composition  
2 comprises a material selected from the group consisting of oxalate-degrading microbes and  
3 oxalate-degrading enzymes.

1           27. The composition, according to claim 26, wherein said composition comprises  
2 whole, viable oxalate-degrading bacteria.

1           28. The composition, according to claim 26, wherein said composition comprises  
2 cell lysate of oxalate-degrading bacteria.

1           29. The composition, according to claim 26, wherein said bacteria are *Oxalobacter*  
2 *formigenes*.

1           30. The composition, according to claim 26, wherein said bacteria are selected from  
2 the group consisting of *Clostridium* and *Pseudomonas*.

1           31. The composition, according to claim 26, wherein said composition comprises  
2 oxalate-degrading enzymes.

1           32. The composition, according to claim 31, wherein said enzymes are formyl-CoA  
2 transferase and oxalyl CoA decarboxylase.

1           33. The composition, according to claim 32, which further comprises a compound  
2 selected from the group consisting of oxalyl CoA,  $MgCl_2$ , and TPP.

1           34. The composition, according to claim 26, wherein said composition is formulated  
2 to reduce deactivation in the stomach.

- 1           35. The composition, according to claim 34, wherein said composition is coated with  
2           a material which preferentially degrades in the small intestine.